

1. A method of processing a request for a data communications session in a data network, comprising:

determining a set of cells contiguous or near to the initial cell to which the session may be transferred during the pendency of the session;

admitting the session to the initial cell if there is sufficient bandwidth in the initial cell and the identified contiguous cells.

3. The method of Claim 1 wherein the step of identifying contiguous cells comprises a step of identifying contiguous cells to which the session may travel by identifying cells previously occupied by the user.

4. The method of Claim 3 wherein the step of  
30 identifying cells previously occupied by the user  
comprises the step of identifying the percentage of time  
in which the user resides in a particular cell.

10           6. The method of Claim 1 wherein the step of  
determining whether the selected set of cells have  
sufficient bandwidth comprises the step of calculating a  
probability that a user requesting the session will  
enter a given cell and multiplying the probability by the  
15 requested bandwidth to yield a probabilistic weighted  
bandwidth and comparing the probabilistic weighted  
bandwidth to the actual available bandwidth in the given  
cell.

20           7.    The method of Claim 1 and further comprising:  
              storing in a data base for a plurality of potential  
users of the network a data set representing the historic  
usage pattern of each of the plurality of users with  
respect to the percentage of calls which affect a  
25 plurality of numbers of cells.

determining if the user requesting the service has ever resided in the initial cell or the contiguous or near cells; and

10           9. The method of Claim 1 wherein the step of  
determining whether the selected set of cells have  
sufficient bandwidth comprises the step of determining  
the available bandwidth at a contiguous or near cell by  
combining a fraction of the actual bandwidth available  
15 for that cell with a fraction of the historic bandwidth  
usage at that cell at a predetermined period of time in  
the future.

10. The method of Claim 1 wherein the step of  
20 determining a set of cells comprises the step of  
generating a random probability fraction and adding the  
transit cell probabilities associated with a particular  
user until the random probability is exceeded and  
including all the cells identified within the identified  
25 number of transits from the initial cell within the set  
of cells identified.

11. A data communications system comprising:

a plurality of base transceiver stations each station associated with a cell;

5 a resource manager in communication with each of the base transceiver stations and operable to perform an admission control decision upon request from the base transceiver stations, the admission control decision comprising the steps of:

10 determining whether there is sufficient bandwidth to accommodate the session in the initial cell associated with the request;

determining a set of contiguous set of cells contiguous to the initial cell to which the session may be transferred during the pendency of the session;

15 determining whether the contiguous cells have sufficient bandwidth to service the session; and

admitting the session to the initial cell if there is sufficient bandwidth in the initial cell and the identified contiguous cells.

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12. The system of Claim 11 wherein the resource manager is operable to store and use a table of data comprising historic usage information for a plurality of users of the system.

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13. The system of Claim 12 wherein the historic usage information comprises information associated with the cells in the system most frequently occupied by the user.

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14. The system of Claim 12 wherein the historic usage information associated with the number of cells affected by calls made by each of the plurality of users.

5        15. The system of Claim 11 wherein the resource manager is operable to store and use a table of data comprising historic bandwidth usages information for a plurality of cells in the system.

10        16. The system of Claim 15 wherein the usage information comprises usage information associated with usage levels at different times of day.

15        17. The system of Claim 15 wherein the usage information comprises usage information associated with usage levels at different day of the week.

09040632-072004